CLAIMS

1) A method of producing a fuel injector (1) comprising a tubular injector body (2) extending along a given axis (3); a tubular valve body (5) housed inside a seat (9) in the injector body (2) and coaxial with the injector body (2); and an annular chamber (25) defined by the injector body (2) and the valve body (5); the method comprising connecting the valve body (5) to the injector body (2), and fixing the valve body (5) to the injector body (2) in a given position along the axis (3); and the method being characterized in that the valve body (5) is connected and fixed to the injector body (2) by means of a driving operation to interference fit the valve body (5) inside the seat (9) in the injector body (2).

2) A method as claimed in Claim 1, characterized in that said seat (9) in the injector body (2) is a hole (9) having a cylindrical inner face (24) with a first diameter (D1); and in that the valve body (5) has a cylindrical outer face (16) with a second diameter (D2).

3) A method as claimed in Claim 2, characterized in that said driving operation is performed with an interference of 10 to 20 microns between the second diameter (D2) and the first diameter (D1).

4) A method as claimed in Claim 2, characterized by grinding the cylindrical inner face (24) of the hole (9) and the cylindrical outer face (16) of the valve body (5).

5) A method as claimed in Claim 1, characterized by heating the injector body (2) and cooling the valve body (5) just before performing said driving operation.

6) A method as claimed in Claim 5, characterized by cooling the valve body (5) using liquid nitrogen.

7) A method as claimed in Claim 1, characterized by forming an annular groove (20) on said valve body (5); said groove (20) interrupting the cylindrical outer face (16) of the valve body (5), and defining said annular chamber (25) together with the cylindrical inner face (24) of said hole (9).

8) An injector comprising a tubular injector body (2) extending along a given axis (3); a tubular valve body (5) housed inside a seat (9) in the injector body (2) and coaxial with the injector body (2); and an annular chamber (25) defined by the injector body (2) and the valve body (5); the injector (1) being characterized in that the valve body (5) is fixed to the injector body (2) by means of a driving operation to interference fit the valve body (5) inside the seat (9) in the injector body (2).

9) An injector as claimed in Claim 8, characterized in that said seat (9) is a hole (9) having a cylindrical inner face (24) with a given first diameter (D1); and in that the valve body (5) has a cylindrical outer face (16) with a given second diameter (D2).

10) An injector as claimed in Claim 9, characterized in that the interference between the second diameter (D2)

and the first diameter (D1) is 10 to 20 microns.

11) An injector as claimed in Claim 8, characterized in that the cylindrical inner face (24) of the hole (9) and the cylindrical outer face (16) of the valve body (5) are ground.

12) An injector as claimed in Claim 10, characterized in that said valve body (5) has an annular groove (20) dividing said cylindrical outer face (16); said annular chamber (25) being defined by the annular groove (20) and by a portion of the cylindrical inner face (24) of the injector body (2).

13) An injector as claimed in Claim 12, characterized in that said annular groove (20) comprises a cylindrical first face (21) parallel to the cylindrical outer face (16) of the valve body (5); and two annular second faces (22) on opposite sides of the cylindrical first face (21).

14) An injector as claimed in Claim 13, characterized in that each annular second face (22) is perpendicular to said given axis (3), and extends from the cylindrical first face (21) of the annular groove (20) to the cylindrical outer face (24) of the injector body (2).